

MONTHLY WEATHER REVIEW.

(GENERAL WEATHER SERVICE OF THE UNITED STATES.)

WASHINGTON, D. C., MARCH, 1882.

WAR DEPARTMENT,
OFFICE OF THE CHIEF SIGNAL OFFICER,
DIVISION OF TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

Meteorological data received at this office for the month of March have been carefully examined, and a general summary of the several meteorological elements is given below with accompanying charts. That part of this REVIEW descriptive of the weather conditions of North America during the month of March, 1882, is based upon observations taken at more than seven hundred stations, so distributed as to furnish trustworthy records of atmospheric phenomena occurring in the United States and British America between the twenty-fifth and fifty-fifth parallels of latitude.

In comparing the weather conditions which are the subject of this REVIEW with those of the corresponding period of previous years, the most noticeable features are:

First: the excessive temperature over the mean temperature of March of previous years, in all districts east of the Rocky Mountains, and on the North Pacific coast, where the excess in Oregon and Washington Territory ranged as high as 7° above the mean for the month.

Second: the excess of rainfall in the central Mississippi, the Ohio valley and Tennessee, where the rainfall was greatly in excess during the previous month, thus causing a continuation of the destructive floods in the lower Mississippi river and its tributaries, where the water has risen in many places to a higher stage than ever before known.

Third: the slight excess of rainfall in southern California, which, when considered in connection with the rainfall of the preceding month, is favorable for the agricultural and grazing interests of that region.

In considering that portion of THE REVIEW referring to International Meteorology, the most marked features are the extreme high barometer and unusually cold weather that prevailed in the eastern hemisphere during January, 1880. The chart of areas of low barometer for April, 1880, accompanying this REVIEW exhibits the movements of forty-three barometric minima, or a larger number than previously traced on any other chart of this series.

In preparing THE REVIEW the following data have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at one hundred and thirty-five Signal Service stations and fifteen Canadian stations, as telegraphed to this office; one hundred and ninety monthly journals and one hundred and seventy monthly means

from the former, and fifteen monthly means from the latter; two hundred and eighteen monthly registers from Voluntary Observers; fifty-eight monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; Marine Reports through the co-operation of the New York Herald Weather Service; abstracts of Ships' Logs, furnished by the publishers of "The New York Maritime Register"; monthly reports from the local weather services of Iowa, Nebraska and Missouri, and of the Central Pacific railway company; trustworthy newspaper extracts; special reports.

BAROMETRIC PRESSURE.

The distribution of mean atmospheric pressure over the United States and Canada, is shown by the isobarometric lines, (in black) upon chart ii. The area of lowest mean pressure occupies the regions northeast of New England and the area of high pressure extends over the southern states and the Rocky mountain regions, as in the preceding month. The barometer has fallen about .05 of an inch in the southern states, where the isobar of 30.10 corresponds with that of 30.15 of February. The pressure has increased .05 of an inch on the North Pacific coast, and has diminished .05 of an inch in southern California.

The low area of 30.00, which was central north of the lake region has apparently moved to the northeast and beyond the limits of the stations of observation. The pressure has remained nearly stationary at the stations between the Mississippi river and the Rocky mountains.

DEPARTURES FROM THE NORMAL VALUES FOR THE MONTH.

Compared with the means of previous years, the pressure is slightly above the normal in the southern states and the lake region. It is also slightly above the normal in southern California, and about .1 of an inch above, on the North Pacific coast. Compared with March, 1881, the barometer is about .3 of an inch higher in New England; from .15 to .25 of an inch higher in the southern states east of the Mississippi, and about .2 of an inch higher in the lake region. On the Pacific coast, the pressure is .1 of an inch higher at San Francisco than in March, 1881.

BAROMETRIC RANGES.

The range of pressure for the present month has varied from .2 of an inch to 1.48 inches, the least range being at Havana, and the greatest range at Alpena. The range of barometer increases with the latitude, and from the coast toward the interior of the continent. In the several districts, the barometric range has been as follows:

New England: 1.42 inches at Burlington; 1.18 inches at Springfield; and .97 of an inch on the summit of Mount Washington.